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$$x = v (y + z + yz)$$

$$y = 0$$

$$x = vz.$$

The immediate verbal interpretation of the first of which is, that *the cases in which X is true (x) are found by taking (=) the aggregate of all the cases in which Y and Z are separately and simultaneously true (y + z + yz), and selecting from this aggregate according to some law of election (v), the nature of which is not defined in the proposition.*

Mr. Graves added, that he had the satisfaction of learning that his suggestion, with respect to the mathematical expression of hypothetical propositions, had met with Mr. Boole's approval. In fact that gentleman had himself contemplated making the change here proposed, in pursuance of a like hint thrown out by Mr. Graves in the case of Categoricals.

Rev. Dr. Todd read the following extract from a letter addressed to Dr. Apjohn, from Robert R. Cornwall, Esq., of Killucan :

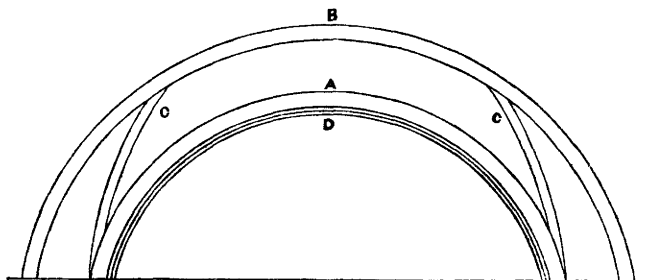
“ In digging round a rock in one of my fields, for the purpose of having it blasted, four very old graves were found ; the bodies had evidently no coffins, but were surrounded on three sides by common, rough, flat stones, set upright on the edge. The rock answered for the headstone. The graves were but three feet long, twenty-two inches wide, and little more than two feet from the bottom of the grave to the grass. The bones very much decayed and broken ; the top of one skull, and the face of another, were all that I could get in any way sound.”

The President read the following communication from Mr. Stewart Blacker, upon an extraordinary Rainbow observed by him on the 7th of March in the north of Ireland :

“ *Carrick Blacker, Portadown, Co. Armagh,*

“ *March 7, 1848.*

“ MY DEAR PRESIDENT,—I have just observed a curious rainbow, which presented the following appearance, and think a note of the occurrence may be interesting to you.



“ In the rough diagram I have sketched, A represents the primary rainbow; B the secondary; cc two spurs, or portions of another bow, shooting off from the two ground ends of the primary bow, and joining the secondary; DD two minor bows, composed of the violet colour only.

“ In the two spurs the order of colours was the same as in the primary bow, and not reversed, as in the secondary. The whole was relieved against a dark, eastern sky, and very vivid and intensely bright in colour, and perfect in form. The hour, about a quarter to 5 o'clock, and the sun nearly setting, with a smart, passing shower. Of all the rainbows I have ever seen, none appeared *so close* to me.

“ Very truly yours,

“ STEWART BLACKER.”

In a subsequent letter Mr. Blacker writes :

“ Between the bow and the sun (which, as I observed before, was very bright, and near setting) was the River Ban, swelled by the winter rains into a large lake.

“ Do you think the triple rainbow could possibly be accounted for by supposing the sun's rays reflected from the

expansive river, and thus striking the drops of rain in another direction? The river was in a perfect blaze of reflected light, like a mirror, at the time; in fact, less endurable by the eye than the luminary itself."

The President observed, that the explanation suggested by Mr. Blacker for this somewhat unusual phenomenon was undoubtedly the correct one. In fact, the *axis of vision*, as it is called,—or the axis of the cone of rays which form the bow,—is, in this case, the line drawn from the eye of the spectator in the direction of the sun's *reflected* rays; and accordingly the centre of the arch is a point as much *above* the horizon, as the centre of the original bow is *below* it. The phenomenon is manifestly the same as if the portion of the circle of the original bow, which is *below* the horizon, were turned upwards. The arch of the extraordinary, and that of the original bow, therefore, together form a complete circle; the former exceeding a semicircle as much as the latter falls short of it.

The President stated, that he had found two accounts of a similar phenomenon in the early volumes of the Philosophical Transactions: one observed by Halley in 1698, on the banks of the River Dee; and the other by Mr. Sturges in 1792, on the south coast of England. It is strange that it should not have been more frequently noticed, seeing that the only condition of its appearance (in addition to the ordinary conditions of the common bow) is the presence of a reflecting surface—such as the sea or a river.

James Pim, Jun., Esq., mentioned a remarkable aurora seen by him on the 19th of last month, in connexion with the obscuration of the moon.